



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
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DEC 20 2001

Ref:ENF-T

Mr. T. E. Crull  
Refinery Manager  
Sinclair Oil Corporation  
Sinclair Casper Refinery  
P. O. Box 510  
Evansville, WY 82636

RE: Gasoline Loading Rack Voluntary Audit  
Report, Dated September 19, 2001

Dear Mr. Crull:

The Environmental Protection Agency (EPA) received Sinclair Oil Corporation's (Sinclair) MACT, Subpart R, Voluntary Audit Report (Audit Report) on September 26, 2001. The Audit Report was submitted in response to EPA's August 20, 2001, invitation to self-audit.

In the Audit Report, Sinclair requested that EPA "formally cite the differences between a thermal oxidizer system and a flare system with respect to 40 CFR 63 Subpart R applicability." Specifically, Sinclair seeks clarification on the requirement that temperature be established as the monitored operating parameter for the thermal oxidation system in use at the Casper and Sinclair, Wyoming facilities, and, possibly, at other Sinclair facilities.

Sinclair states in the Audit Report that it operates a John Zink "enclosed flare" at its Sinclair-Casper Gasoline Loading Rack (refinery). Sinclair further states that it "concluded at the time of 40 CFR 63 Subpart CC applicability that the loading rack control device in place at the refinery was a flare." Furthermore, Sinclair asserts that a continuous parameter monitoring system (CPMS) capable of measuring temperature was installed in the combustion chamber as part of the device's (John Zink enclosed flare) upgrade in 1998. Also, Sinclair has installed an ultraviolet sensor in proximity to the pilot light to indicate the presence of a flame.

EPA agrees with Sinclair's decision to upgrade the loading rack control device (John Zink enclosed flare) by installing a CPMS to monitor the temperature. The MACT standard at 40 C.F.R. 63, Subpart R, requires that thermal oxidation systems monitor temperature for continuous compliance monitoring (§63.427(a)(3)) and to be performance tested to demonstrate compliance with the emission limit (§63.425(a)). The John Zink enclosed flare found at the Sinclair refinery is



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a unit described on the John Zink Website as an "enclosed combustor" with sample ports and thermocouples in an enclosure above the flame zone. It is clear that the John Zink unit is a thermal oxidation system that can be tested using the EPA methods 2B, 25A or 25B, which are the applicable mass emission measuring methods. Furthermore, the John Zink website presents another oxidation system called an "Elevated Open Flame Combustor." These systems meet the typical description of an open flame flare. For these systems a heat sensing device is required, such as an ultraviolet beam sensor, to monitor the presence of a flame (§63.427(a)(4)). These types of systems are required by §63.11(a)(5) to monitor the presence of a flame **at all times** [my emphasis]. Flares are operated with a continuous pilot, while the John Zink enclosed flare is not operated with a continuous pilot. The pilot is ignited when gasoline cargo tanks begin loading at the rack.

Open flame flares cannot be tested using the applicable EPA methods (i.e., 2B, 25B or 25A) and therefore, must meet the flare design specifications in the general provisions, §63.11(b) as required by §63.425(a). 40 C.F.R. 63.425(a) states: "if a flare is used to control emissions and emissions from this device cannot be measured using these methods and procedures, the provisions of §63.11(b) apply." Therefore, to further clarify, the MACT standard Subpart R, requires thermal oxidation systems, which can be tested using the applicable EPA methods (i.e., i.e., 2B, 25A, and 25B) to be tested as such and to have temperature established as the monitored operating parameter. Thus, for these types of systems, §63.11(b) does not apply. Flare systems (open flame flares) which cannot be tested using the applicable EPA methods (i.e., 2B, 25B, or 25A) are required to meet the design specification found at 40 C.F.R. 63.11(b).

EPA agrees with Sinclair that the John Zink enclosed flare is an acceptable air pollution control device that can be used to control emissions from refinery gasoline loading rack(s). What is at issue is how continuous compliance will be demonstrated for the John Zink enclosed flare systems. That is, will monitoring the presence of a pilot flame or will monitoring the temperature be the required monitored operating parameter. It is EPA's interpretation that §63.11(b) was established for those open flame flares that cannot be tested by using the applicable mass emission measuring methods and, therefore, those types of systems must meet the design specification found at §63.11(b).

In closing, the John Zink enclosed flare in use at Sinclair facilities can be tested by using the applicable EPA mass emission measuring methods and meets the definition of a thermal oxidation system, therefore, temperature must be monitored as the operating parameter.

Should you have any questions regarding this matter, the person most knowledgeable is Art Palomares. You may reach Art at 303-312-6358.

Sincerely,



Martin Hestmark, Director  
Technical Enforcement Program

cc: Dan Olson, Administrator  
Air Quality Division  
Wyoming Department of Environmental Quality

Samuel B. Greene  
Corporate Air Quality Engineer  
Sinclair Oil Corporation